

WA4MNAFR1

Fractions and decimals

Core + Challenge

Equivalent Fractions

I can find and generate equivalent fractions by multiplying or dividing the numerator and denominator by the same number.

Name: _____ Date: _____ Score: / 53

Key idea

Equivalent fractions name the same amount in different ways. Multiply (or divide) the numerator and denominator by the *same* number to make an equivalent fraction — the value doesn't change.

E.g. $\frac{1}{2}$: multiply top and bottom by 2 $\rightarrow \frac{2}{4}$; multiply by 4 $\rightarrow \frac{4}{8}$. So $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$.

A Fluency *practise the skill*

/16 marks

Write the missing number to make each pair of fractions equivalent.

1. $\frac{1}{2} = \frac{?}{4}$ _____

2. $\frac{1}{3} = \frac{?}{9}$ _____

3. $\frac{2}{5} = \frac{?}{10}$ _____

4. $\frac{3}{4} = \frac{?}{8}$ _____

5. $\frac{1}{2} = \frac{?}{6}$ _____

6. $\frac{2}{3} = \frac{?}{9}$ _____

7. $\frac{1}{4} = \frac{?}{12}$ _____

8. $\frac{3}{5} = \frac{?}{10}$ _____

9. $\frac{4}{6} = \frac{?}{3}$ _____

10. $\frac{6}{8} = \frac{?}{4}$ _____

11. $\frac{2}{4} = \frac{?}{2}$ _____

12. $\frac{5}{10} = \frac{?}{2}$ _____

13. $\frac{1}{5} = \frac{?}{20}$ _____

14. $\frac{3}{6} = \frac{?}{2}$ _____

15. $\frac{2}{8} = \frac{?}{4}$ _____

16. $\frac{4}{12} = \frac{?}{3}$ _____

B Core *apply the skill to problems*

/21 marks

- 1 Write two fractions that are equivalent to $\frac{2}{3}$.

[3 marks]

Answer: _____

- 2 A pizza is cut into 8 equal slices. 4 slices are eaten. Write the fraction of pizza eaten in simplest form, then write an equivalent fraction with a denominator of 16.

[4 marks]

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Answer: _____

3

Circle the fraction that is NOT equivalent to $\frac{3}{4}$: $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{15}$, $\frac{15}{20}$.
Explain how you know.

[3 marks]

Answer: _____

4

A recipe uses $\frac{2}{6}$ of a cup of sugar. Write this fraction in its simplest form,
then find an equivalent fraction with a denominator of 9.

[4 marks]

Answer: _____

5

Write $\frac{10}{15}$ as a fraction in its simplest form.

[3 marks]

Answer: _____

6

Two classes share lollies. Class A gets $\frac{4}{10}$ of the lollies and Class B gets $\frac{2}{5}$. Show that both classes receive the same fraction of lollies.

[4 marks]

Answer: _____

C

Reasoning *explain, justify and check*

/9 marks

1

Explain why $\frac{2}{4}$ and $\frac{1}{2}$ represent the same amount, even though they look different.

[2 marks]

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2

A student says that to find an equivalent fraction, you only need to multiply the denominator. Explain why this is incorrect.

[2 marks]

3

Explain how you could check whether $\frac{6}{10}$ and $\frac{9}{15}$ are equivalent fractions.

[2 marks]

4

A student says that a fraction with a bigger numerator and denominator is always bigger in value than a fraction with smaller numbers. Is this true? Explain and give an example that supports your answer.

[3 marks]

D

Challenge *multi-step and problem-solving*

/7 marks

1

Find a fraction equivalent to $\frac{3}{5}$ where the denominator is between 20 and 30.

[2 marks]

Answer: _____

2

A fraction equivalent to $\frac{4}{7}$ has a numerator of 20. What is its denominator?

[2 marks]

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Answer: _____

3

Jack says $\frac{5}{8}$ and $\frac{15}{24}$ are equivalent, and Mia says $\frac{5}{8}$ and $\frac{10}{18}$ are equivalent. Who is correct? Show your working for both and explain.

[3 marks]

Answer: _____

How did I go?

Fluency ____/16 Core ____/21 Reasoning ____/9 Challenge ____/7 **Total ____/53**

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